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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,868	03/23/2004	Mark S. Schaefer	GP-304231 (2760/149)	2697

7590 04/14/2009
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EXAMINER

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ART UNIT	PAPER NUMBER
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2191

MAIL DATE	DELIVERY MODE
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04/14/2009

PAPER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/806,868
Filing Date: March 23, 2004
Appellant(s): SCHAEFER, MARK S.

James D. Stevens
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 01/05/2009 appealing from the Office action mailed 07/03/2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US Patent Pub No. 2004/0117785 A1 Kincaid 6-2004

Kellerer et al., "(Auto) Mobile Communication in a Heterogeneous and Converged World" IEEE (December 2001), pp. 41-47

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 28-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kincaid, Pub No. US 2004/0117785 A1, filing on 12/2002, in view of Kellerer et al., “(Auto) Mobile Communication in a Heterogeneous and Converged World”, 12-2001, IEEE.

According to Appellants’ grouping, the claims 28-44 stand or fall together. Under Appellants’ argument, the claim 28 is their controlled claim.

Rejection of the claims will be provided as follows:

As per claim 28: Kincaid discloses, *A method for managing a software configuration update of a vehicle, the method comprising the steps of:*

identifying an updated version of a first software module for a first electronic module

(Kincaid: See FIG. 4: #405, “RECEIVES LIST OF LATEST VERSIONS OF COMPONENTS IN DLM k – further see [0008]: “a version identifier” - See FIGURE 2, #263, a space that stores ‘download module’ (*first software module*) in a computing device 111 (*first electronic module*)) *on the vehicle;*

obtaining vehicle configuration data representative of a current software configuration on the vehicle, wherein the vehicle configuration data includes the versions of software modules currently installed in electronic modules connected to the vehicle telematics unit over

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a vehicle communication bus, and the vehicle configuration data identifies interdependencies between the software modules

(See FIG. 4: #410 AND #415: "LIST OF LASTEST VERSION" (*configuration data* - and further see p. 5 [0051], refer to "request the download of the latest version.. all dependent components are obtained."); "CURRENTLY INSTALL VERSIONS" (*current software configuration*), "INTERDEPENDENT COMPOENET(S)" (*interdependencies between the software modules*);

determining whether the updated version of the first software module is compatible with the current software configuration (See [0052]: "compares the list...". See Figure 4: #410, #425, the DLM Manager compares received data with current versions); ***and***

updating the first software module with the updated version by transferring the updated version of the first software module from the vehicle telematics unit (FIGURE 2: #210 - *telematics unit* is equivalent to either transceiver 210 or mobile station) ***to memory*** (FIGURE 2: #260) ***of the first electronic module*** (FIGURE 2: #263) ***via the communication bus*** (wire/interconnection of #111) ***if it is determined that the updated version of the first software module is compatible with the current software configuration*** (See Figure 4. "Replaces old versions"; See [0052]).

Kincaid does not explicitly show ***transferring the updated version of the first software module from the vehicle telematics unit***; however, Kincaid's software update version (claimed limitation: *first software module*) is transferred from a communication transceiver to (FIGURE

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2) to the memory of the mobile computing device which can be put or plugged in a car by means of “mobile”.

Kellerer discloses a vehicle communication network (Kellerer: See Figure 3 (p. 44)) having a gateway (Figure 3) that includes “Telematics” (Figure 1 (p. 41)). The vehicle communication network enables plug-in to mobile devices. Thus, when a device like laptop, radio, mobile phone (Figure 3: ‘Electronic modules’:.) requires for software update (such as seen in Figure 1: “software update”, “car diagnostics”), it needs using the vehicle communication network as seen in Figure 3, or Figure 4 (p. 45) for connecting to the gateway in the vehicle, and thus the server and gateway will provide the software update.

Therefore, it is obvious to an ordinary in the art to combine the teaching vehicle communication network including telematics of Kellerer used to download the software update such as the software update in the method of Kincaid. Downloading software update by connecting to vehicle communication network in the car will be conforming to the standard download for managing software configuration update that is available from a server for every remote device, including used in a vehicle, which has at least a network interface.

As per claim 29: regarding,

The method of claim 28, wherein the obtaining step further comprises retrieving the vehicle configuration data (Kincaid: [0037] and see FIGURE 2, #260, and FIGURE 3, #263) from a call center (‘Software update server’) and the determining step further comprises determining at the call center whether the updated version of the first software module is compatible with

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the current software configuration. (e.g. the communication in FIGURE 1 described in FIGURE 2, or 0037; see [0044], and further see Kellerer).

As per claim 30: regarding,

The method of claim 28, wherein the obtaining step further comprises obtaining the versions of the software modules currently installed in one or more electronic modules connected to the vehicle telematics unit (i.e. downing software files as noted) ***over a vehicle communication bus by interrogating the one or more electronic modules via the vehicle telematics unit.*** (Kincaid: See Figure 3, and FIGURE 4, and further see FIGURE 2, the wired complexity connected to main processor for downloading the software files, and further see Kellerer).

As per claim 31: regarding,

The method of claim 30, further comprising the step of:
providing the obtained versions of the software modules currently installed to the call center (See FIGURE 4, i.e. downloaded versions from software update server); ***and wherein the determining step further comprises determining at the call center whether the updated version of the first software module is compatible with the current software configuration.*** (Kincaid: See FIGURE 4, and [0052]; the remote server provides the list of files and version identifiers, where the DLM uses this information for how to replace the old version, and further see Kellerer).

As per claim 32: regarding,

The method of claim 30, wherein the obtaining step further comprises obtaining the interdependencies between the software modules from the call center (i.e. information and

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software sent by remote sever contain the interdependencies of software, so that the DLM know how to replace the old version), *and the determining step further comprises determining at the vehicle telematics unit whether the updated version of the first software module is compatible with the current software configuration* (Kincaid: See Figure 4, and further see Kellerer).

As per claim 33: regarding,

The method of claim 28, wherein, if it is determined that the updated version of the first software module is not compatible with the current software configuration (It is inherent in “comparing”, where the comparing step in the reference provides the differences between new one and old one so that it can replace the old one), *then the method further comprises the step of replacing at least one of the other interdependent software modules with a version of the at least one other interdependent software module that is compatible with the updated version of the first software module* (Kincaid: See Figure 4, refer to the task of DLM, and further see Kellerer).

As per claim 34: regarding,

The method of claim 33, further comprising the steps of:
determining which of the other interdependent software modules conflicts with the updated version of the first software module; and determining whether the conflicting software modules have a version available that is compatible with the updated version of the first software module. (Kincaid: See Figure 4, refer to the task of DLM, and further see Kellerer).

As per claim 35: regarding,

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The method of claim 27, further comprising the step of issuing a software request to the call center for the updated version of the first software module (Kincaid: [0009], and further see Kellerer).

As per claim 36: Functionality of the claim is the same as of Claim 28: See rationale addressed in the claim 28.

As per claim 37: Functionality of the claim is the same as of Claim 29: See rationale addressed in the claim 29.

As per claim 38: Functionality of the claim is the same as of Claim 30: See rationale addressed in the claim 30.

As per claim 39: Incorporated with the rejection of claim 36, regarding, *The method of claim 36, wherein the identifying interdependencies step further comprises identifying, at the call center, interdependencies between the updated version of the first software module and one or more other software modules installed in one or more of the electronic modules* (Kincaid: See FIGURE 4, and further see Kellerer).

As per claim 40: Functionality of the claim is the same as of Claim 33: See rationale addressed in the claim 33.

As per claim 41: Functionality of the claim is the same as of Claim 34: See rationale addressed in the claim 34.

As per claim 42: Incorporated with the rejection of claim 36, regarding, *The method of claim 36, wherein the step of identifying an updated version further comprises receiving a notification* (refer to the means of internet accessibility, voice data, email, conventional triggering event,

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receipt of notification message, etc, in [0044]) ***at the vehicle telematics unit from the call center that the updated version of the first software module is available for installation in the first electronic module on the vehicle*** (Kincaid: See [0008]: “a version identifier”, [0011]: component/newer components/current versions, where these components are stored in a remote server [0050], and further see Kellerer);

As per claim 43: Incorporated with the rejection of claim 36, regarding, ***The method of claim 36, wherein the step of identifying an updated version further comprises issuing a software request for each software module installed in the one or more electronic modules on the vehicle on a periodic basis and determining whether the latest versions of the software modules are installed on the vehicle*** (Kincaid: [0009], FIGURE 4, and further see Kellerer).

As per claim 44: See rationale addressed in the rejection of claim 28.

As per claims 45-48: See rationale addressed in the rejection of claims 29-35.

(10) Response to Argument

It appears Appellants argued claims 28-44 in group and the Appellants traverse the rejection as follows:

1) “no proper reason has been provided for combining Kincaid’s methods of wirelessly receiving software files from a software upgrade server at a mobile station with Kellerer’s Uses of Wireless Device connected to a vehicle”.

2) Claims 28, 36, and 44 – Neither Kincaid Publication nor the Kellerer reference discloses “A first Electronic Module on A vehicle or “Vehicle Configuration Data of a Current Software Configuration on a vehicle”.

Examiners response:

1) Under the Appellants’ argument 1 above, it appears Appellants contend that the motivation for combination is not understandable and fails to explain why one of ordinary skill would combine the teachings of Kincaid with Kellerer.

Examiner direct to recitation in claim 28, which appears being the controlled claim on appeal. The claim recites a method for managing a *software configuration update* of **a vehicle**, but it is merely for updating a software version (i.e. *software configuration update*) , which employs a common method by transferring an updated version (claim recites as: *the first software module*) from a signal transmission device (claim recites as: *the vehicle telematics unit*) to a memory of a **computing device in a vehicle** (claim recites as: *first electronic module*) based on a determination if the update version is compatible with a current software configuration **on the vehicle**.

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With Kincaid, it is provided with a method for updating software of an old version in a mobile computing device by transferring the latest version of the software including its interdependent components from update server based on the comparison to the installed versions of the same components in DLM(s) (see Kincaid, FIGURE 4) as well as description in the reference (p. 1, @ [008]): DLM is defined as:

“1) a memory capable of storing the received software files in a plurality of download modules, wherein each download module (DLM) comprises a plurality of related components that operate together to perform a particular function; and 2) a DLM controller associated with the memory capable of determining a version identifier associated with each component in each of the plurality of download modules, wherein the controller is further capable of comparing a first group of version identifiers associated with a first plurality of related components in a first download module with corresponding version identifiers associated with the first plurality of related component that are contained in a list of latest component versions.”

The method of the claims including the recitation “*current software configuration*” reads on the functions performed by the DLM and its DLM controller to the updating as of FIGURE 4. It appears that the claim intends the updating method to the software in a memory of a computing device in *a vehicle* via a *telematics unit*, while the Kincaid updating the software in a memory of a computing device such as a mobile phone or a PDA from an update server via transceiver and downloaded to the memory by means of processing circuitry (FIGURE 2).

With Kellerer, it provides a vehicle using a gateway including a Telematics unit. With this communication device, a computing device in the vehicle can be operated like a desktop at home. It allows the computing device in the vehicle updating its software from servers via the gateway/telematics (see Figure 1).

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The claimed functionality is merely to change in shape - *electronic modules* versus components of mobile device and *current software configuration* versus basic operating system for control mobile device components. It appears claiming the same method as of Kincaid, but directs the claim with a sequence of adding ingredients - *vehicle, telematics unit*, and thus then updating the vehicle software. Furthermore, the claimed method also uses the common method in computer software update. The result of the claimed method is the same to every conventional method in software updating. Thus, the obviousness of the claim is given in every case in the MPEP 2144.04.

On the other hand, when viewing the claim against Kincaid, it is so obvious to direct the deficiency of the Kincaid (considered as software updated on a mobile computing device) by combining the teaching with the updating software by the means of a gateway in a computing device in a vehicle of Kellerer (Kellerer: Figure 1, p. 41, Figure 4, p. 45). In Figure 1, it shows the gateway provides the software update on the vehicle and the gateway includes a telematics unit.

2) Under the Appellants' argument 2 above, Appellants merely submit that the Kincaid's software upgrade is carried by a wireless device and functioned to store on the wireless device (Brief p. 10, @ lines: 3-5) and their claim is electronic modules such as *vehicle control modules, vehicle sensors* on a vehicle (Brief: p. 10, start at line 6). Appellants contend that Kincaid does disclose "*module*" (Brief: p. 10, @ line 12), but the module is not the electronic module as they claimed; and Kellerer's gateway connecting wireless device does not makeup the deficiency. Appellants contend that Kincaid makes no reference to configuration data representative of a

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current software on a vehicle and Keller does not disclose vehicle configuration data as they claim (Brief: p. 10, @ paragraph “Additionally, ...”).

As mentioned in the above Examiner’s points, the Appellants’ method fail to make a difference over standard software update. Each step of their claimed method is structured the same as of Kincaid as mapped and shown in the teaching of Kincaid. For example, see the performed steps of claim 28 and the steps shown in Kincaid’s Figure 4. The method for upgrading software of the claims for a vehicle computing device shows that it performs as the same as the software upgrading for a mobile computing device disclosed in the Figure 4 of Kincaid.

- Regarding the argument for that Kincaid software upgrade is carried by a wireless device and functioned to store on the wireless device, it does not disclose electronic module as they claimed: It should be noted that the claimed word “*module*”, referred by Appellant as *vehicle control modules, vehicle sensors*, appears being an electronic component operated by the downloaded software update. Thus, it is clear that appellants only intend their update software to a software type (change in shape). Thus, the claim shows the functionality of software update process and the software, but it is intended for controlling vehicle components. It does not show how the software to operate. Therefore, these electronic modules in the vehicle do not provide any patentable difference over the types of software used in the mobile device for controlling its hardware components (see Kincaid’s FIGURE 2). The software in the FIGURE 3, which becomes being stored in the memory #260 of FIGURE 2, is clearly used for controlling the mobile components such as SPEAKER, via the execution of the main processor #240. The types are such as "resources", "executable code" (FIGURE 3) as well as the description (p. 1, @ [008])

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as mentioned indicate the type of software code as being configuration data. It is being configured for controlling the hardware components such as SPEAKER, MICRO PHONE, KEYPAD, etc. in the similar manner of the claim, i.e. the update software is for controlling the electronic modules (*vehicle control modules, vehicle sensors*).

- With regard to the argument that Kellerer's gateway connecting wireless device does not makeup the deficiency. Examiner also directs the Appellants' argument to the Kellerer's Figures (Figure 1, Figure 3 or Figure 4). In Figure 4, it shows a network access interface in a vehicle having a proxy cache; the interface is communicable to networks with computing devices such as lab top, PDA, and mobile phone, and others components of the vehicle such as speaker system, Navigation system, etc. In Figure 3, it shows a wireless access network as a gateway that receives signal data from gateway to the computing devices. In Figure 1, it shows a wireless access network in a vehicle. The wireless access network includes a Telematics unit; includes software update in the same manner of the claim, including other type of features.

The operation in Keller' figure 1 and 4 is operable with computing devices disclosed in Kincaid. Figure 1 shows the gateway included with a Telematics unit. It should be noted that the etymology of *telematics*, is from the Greek "tele" ('far away', especially in relation to the process of producing or recording) and ~Matos (a derivative of the Greek machinari, or contrivance, usually taken in this context to mean 'of its own accord'). As combined, the term "*telematics*" describes the process of long-distance transmission of computer-based information. Thus, the term **telematics** is no difference than a standard wireless transmission device like a gateway or a transceiver in a mobile device. Therefore, it is obvious that with the combination of Kincaid and Kellerer, the method of software update yields the same result as of the claim, in

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which the claim is for downloading software update by connecting to vehicle communication network in the car will be conforming to the standard download.

- With regard to the argument for that Kincaid makes no reference to *configuration data representative of a current software on a vehicle* and Keller does not disclose *vehicle configuration data* as the Appellants' claim. As mentioned above, Kincaid, FIGURE 4 as well as the description in the reference (p. 1, @ [008] indicates it discloses "*configuration data representative of a current software*". The claimed limitation *configuration data representative of a current software* reads on the data of DLM shown in FIGURE 3 and the software of the DLM controller. As named with "resource", "executable code", "basic operating system", etc.,, this is the type of configuration data which is used for controlling the electronic components such as speakers, I/O, etc. With the teaching of Kellerer' Figure 1 and Figure 3, this is obvious to an ordinary in the art to combine this teaching and the teaching of configuring data for the mobile device of Kincaid (FIGURE 3). Thus, when Kelleher uses the update method of Kincaid, the downloaded data for update will have the means of vehicle configuration data.

It should be noted that Appellants group the claims 28-44 stand or fall together, and argue the claim 28 as a controlled claim. Under 37 CFR 41.37(c)(1)(vii):

"When multiple claims subject to the same ground of rejection are argued as a group by appellant, the Board may select a single claim from the group of claims that are argued together to decide the appeal with respect to the group of claims as to the ground of rejection on the basis of the selected claim alone."

Examiner would like to direct to claim 35 which recites:

Claim 35: *The method of claim 27, further comprising the step of issuing a software request to the call center for the updated version of the first software module.*

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The functionality is clearly disclosed by Kincaid ([0009]) or Kellerer (Figure 3). However, Examiner submits that this claim makes all claims 28-44 fall together. It depends on a claim (claim 27) that is not existed. Therefore, under the 37 CFR 41.37(c)(1)(vii), if depicting this claims, the Appellants' claims 28-44 will all fall together.

(11) Related Proceeding(s) Appendix

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

TTV

/Ted T. Vo/

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